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NCDOT Research Project 2001-18

TITLE: Bridge Management System Update

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RESEARCH PERIOD: Jan 2001 – December, 2001

STATUS: Complete

DOCUMENTS/LINKS AVAILABLE: Other Research by Dr. Johnston
Related NCDOT Research (“Structures – Bridge Management” subcategory)
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ABSTRACT:

The objective of this project was to assist the NCDOT in updating parameters used in analysis of bridge inspection data for purposes of bridge management. Various parameters are used in OPBRIDGE, a bridge manage system decision support program for predicting optimum use of funds budgeted and for predicting performance of the bridges of the State of North Carolina in future years under various level of funding. In particular, the project examined and developed parameters for:

1. Unit costs of replacements;
2. Unit costs for rehabilitation;
3. Maintenance effort as a function of element condition;
4. Deterioration rate for major bridge elements;
5. ADT growth rates for the bridge functional classifications and locations;
6. Bridge-related accident unit costs; and
7. Vehicle operating costs.

In most cases, improvements over the previous parameter values were possible as documented in this report.